

# What is Syndromic Surveillance?

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Syndromic surveillance is the ongoing, timely recognition, collection, and analysis of information that may indicate bioterrorist activity or other public health emergency. Syndromic surveillance data are collected prior to the actual diagnosis of disease. Examples include chief complaints of patients seen in a hospital emergency department, increased number of students absent from a specific school or school district, or indicators of certain symptoms within a community; such as increased sales of anti-diarrheal or other (over-the-counter) medications.

The Indiana State Health Department (ISDH) will develop and maintain a statewide system for the collection, analysis, and response to syndromic surveillance information. Used throughout Indiana, this system will aid in identifying a possible bioterrorist event or other public health emergency. The ISDH is evaluating software programs and will develop new programs as needed.

## Why Conduct Syndromic Surveillance?

Syndromic surveillance requires “real time” or immediate recognition and response to specific physical symptoms. Traditional surveillance is based on a known diagnosis. Detection of a possible bioterrorist event requires rapid identification and response. Traditional surveillance generally includes a lag period of several days between reporting of symptoms and the actual diagnosis of an illness. In syndromic surveillance, the suspected illness (or symptoms) will elicit the needed action and response.

Currently, the symptoms associated with exposure to the Category A bioterrorism agents are of primary interest. These diseases include anthrax, botulism, plague, smallpox, tularemia, and viral hemorrhagic fevers. In addition, symptoms of other unusual and unexpected illnesses are also important. Symptoms associated with these illnesses that may initiate investigation include:

- Respiratory symptoms
- Fever/malaise/sepsis
- Flu-like illness
- Neurologic symptoms
- Gastrointestinal illness
- Vesicular rash
- Sudden, unexplained death

## Obtaining Information

The ISDH will implement computer-based systems that will allow direct daily reporting to the agency on bioterrorist symptoms/syndromes or other relevant data. A variety of data sources will be developed over the next two years. Sources may include:

- Hospital Emergency Department patient visits
- Over-the-counter (OTC) medications sold in drug and grocery stores
- School absenteeism counts

- Poison Center “call-in”: information
- Laboratory tests ordered
- Emergency Medical Services dispatch call information
- State mortality statistics
- Ambulatory Care patient visits
- Physicians’ orders and other hospital admission information
- Managed care clinic patient visits
- Veterinary diagnostic laboratories
- Medical Examiner’s (Coroner’s) reports
- Nurse Call lines (third party payors)
- Day Care Centers
- Red Cross, Fire, and Law enforcement calls

## **Role of Local Health Departments**

Local health departments (LHD) will assist in building the statewide infrastructure for syndromic surveillance and response. In addition, the LHDs will aid in investigating any aberrations detected that may indicate a possible bioterrorist event. Assistance from LHDs may include:

- Evaluate compatible systems
- Assist in the recruiting of local partners and participants
- Educate the department, community, and district
- Prepare to follow-up on “alerts”
- Provide feedback to the ISDH on the process in “pilot” areas
- Initiate investigations when data indicates need
- Continue to enhance data reporting relationships with hospitals, physicians, clinics, and schools in local jurisdictions

The ISDH will establish a data collection system by 2004 and will pilot this system using selected hospital emergency departments, the Indiana Poison Center, and selected schools or school districts. Specific pilot areas have not yet been determined. LHDs should continue to develop local knowledge bases about bioterrorism events and bioterrorism preparedness activities. The ISDH will contact the LHDs about specific activities slated for their districts/communities. In addition the ISDH will inform LHDs about local involvement for the statewide program. For questions or more information about the usefulness and/or compatibility of a specific software program with the planned ISDH system, please contact:

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